

# Residential Sprinkler Systems

## *Information about residential sprinkler systems in homes.*

Eight out of ten fire deaths in the United States occur in the home. Every 74 seconds a home burns. Sprinklers and smoke alarms together cut your risk of dying in a home fire 82% relative to having neither – a savings of thousands of lives a year.

### 1 Fire Sprinkler Installation

- ❑ **Installation** - Commercial or residential automatic sprinkler systems should be installed by a qualified contractor who is familiar with Washington State Fire Codes and standards as well as with local fire safety regulations.
- ❑ **Cost** – The average cost of residential sprinklers is \$1.50 per square foot of coverage. The cost of sprinklers is cheaper than having new carpeting placed in your home.

### 2 How Automatic Sprinklers Work

- ❑ **Water supply** – Automatic sprinkler systems supply water to a network of individual overhead sprinklers, each protecting an area below them. Many are hooked direction to your water line and require very minimal water pressure.
- ❑ **How they activate** – Residential sprinklers use “elements” to detect and respond automatically to the source of heat. These sprinklers open automatically in response to heat and spray water on the fire to put it out or keep it from spreading.
- ❑ **Independent operation** – To reduce water damage, each sprinkler head acts independently of the others. Only sprinklers exposed to the heat of the fire will activate.

### 3 Myths

- ❑ **The water damage from sprinklers is worse than a fire.**  
The truth is, a sprinkler will control a fire with a tiny fraction of the water used by fire department hoses, because a sprinkler activated during the early stages of a fire before the fire department can arrive. Automatic sprinkler systems spray water only in the immediate area of the fire, usually with just one sprinkler operating. As a result, the fire is kept from spreading, and widespread water damage is avoided.
- ❑ **Sprinklers go off accidentally, causing unnecessary water damage.**  
The odds are one in 16 million per year that a sprinkler will accidentally discharge because of a manufacturing defect. One study concluding that sprinkler accidents are generally less likely and less severe than mishaps involving standard home plumbing systems. Cigarette smoke is not enough to trigger sprinkler operation.
- ❑ **Sprinklers are ugly**  
Modern residential sprinklers are inconspicuous and can be mounted flush with walls or ceilings. Some sprinklers can even be concealed. And, just like regular plumbing, pipes can be hidden behind ceilings or walls.

**References:** National Fire Protection Association at [www.nfpa.org](http://www.nfpa.org); Home Fire Sprinkler Coalition [www.firesprinkler.org/hfsc/](http://www.firesprinkler.org/hfsc/)